IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claims 1 - 30. (Canceled).

Claim 31. (Currently Amended) A method of driving a solid image pickup device comprising a photoelectric conversion unit, a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals, a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit, and a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, said method comprising the steps of:

transferring electric charges generated in the photoelectric conversion unit during one accumulation period to the charge-voltage conversion unit by the charge transfer means,

wherein the transferring step comprises a first transferring step and a second transferring step, a first signal is read out on a basis of electric charges transferred by the first transferring step, the charge-voltage conversion unit is reset after the first signal is read out, and a second signal is read out on a basis of electric charges transferred by the second transferring step after the charge-voltage conversion unit is reset.

~~performing a primary transfer operation to transfer at least a part of the photoelectric charges accumulated in the photoelectric conversion unit during a charge accumulation period, from the photoelectric conversion unit to the charge-voltage conversion unit; and~~

~~performing at least one other transfer operation, prior to a subsequent charge accumulation period, to transfer remaining photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, wherein the photoelectric conversion unit is not reset prior to the at least one other transfer operation.~~

Claim 32. (Currently Amended) The method of driving a solid image pickup device according to claim 31, wherein output signals read out from the charge-voltage conversion unit following the first transferring step ~~primary transfer operation~~ and the ~~at least one~~ second transferring step ~~other transfer operation~~ are retained, respectively, and added, and a resulting summed output signal is outputted from a horizontal scan circuit to a common output line.

Claim 33. (Currently Amended) The method of driving a solid image pickup device according to claim 31, wherein after the first transferring step ~~primary transfer operation~~ and before the ~~at least one~~ second transferring step ~~other transfer operation~~, at least one intermediate readout operation is performed by resetting the charge-voltage conversion unit and reading out an output signal amplified by the amplification means to a signal output line.

Claim 34. (Currently Amended) A solid image pickup device comprising:

a photoelectric conversion unit;

a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals;

a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit;

a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit; and

a control circuit for controlling the solid state image pickup device to perform a transferring step for transferring electric charges generated in the photoelectric conversion unit during one accumulation period to the charge-voltage conversion unit by the charge transfer means,

wherein the transferring step comprises a first transferring step and a second transferring step, a first signal is read out on a basis of electric charges transferred by the first transferring step, the charge-voltage conversion unit is reset after the first signal is read out, and a second signal is read out on a basis of electric charges transferred by the second transferring step after the charge-voltage conversion unit is reset.

~~a control circuit for controlling the solid image pickup device to perform a primary transfer operation to transfer at least a part of the photoelectric charges accumulated in the photoelectric conversion unit during a charge accumulation period, from the photoelectric conversion unit to the charge-voltage conversion unit, and to perform at a least one other transfer operation, prior to a subsequent charge accumulation~~

~~period, to transfer remaining photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, and wherein the photoelectric conversion unit is not reset prior to the at least one other transfer operation.~~

Claim 35. (Previously Presented) The solid image pickup device according to claim 34, wherein the photoelectric conversion unit is an embedded-type photodiode.

Claim 36. (Previously Presented) An image pickup system comprising:

a solid image pickup device according to 34;

an optical system for focusing a ray of light to the solid image pickup device; and

a signal processing circuit for processing output signals from the solid image pickup device.

Claim 37. (Previously Presented) An image pickup system comprising:

a solid image pickup device according to 34;

an optical system for focusing a ray of light to the solid image pickup device;

a mechanical shutter for determining an exposure time of the solid image pickup device; and

a signal processing circuit for processing output signals from the solid image pickup device.